

WATER WISE GARDENING AND LANDSCAPE MAINTENANCE SERIES

BEST MANAGEMENT PRACTICES HOME LAWN IRRIGATION

The amount of water required to maintain a home lawn depends on quality expectations, the kind of grass being grown, soil type, plant maturity and cultural practices. The following discussion pertains to turf grass growing on a residential lawn and doesn't reflect the maintenance regime required to maintain turf on golf courses, intensively managed athletic fields or other unique situations where temperamental species may be grown and specialized methods are employed.

QUALITY STANDARDS - Water conservation is an important issue to us all and through efficient use, water used to maintain home lawns can be reduced by up to 50 percent with only a 10 percent reduction in turf quality. Less mowing, fewer weeds and reduced disease problems are other benefits of efficient water use in home lawn maintenance.

TYPE OF GRASS - Bermudagrass, buffalograss and zoysia are more drought tolerant than bluegrass or tall fescue and require less frequent irrigation. But, zoysia in particular, while inherently drought tolerant, may require more frequent watering if it develops a thick layer of thatch with roots concentrated therein.

Creeping red fescue, hard fescue and sheep fescue that are commonly included in shady lawn seed mixes are drought tolerant but don't hold up in our summer heat. Likewise, perennial ryegrass isn't very heat or drought tolerant.

Buffalograss is best adapted in western Kansas and tends to become invaded by weeds in the eastern part of the state where more annual precipitation occurs. But, even in eastern Kansas, there are low maintenance situations where buffalograss might be considered.

WATERING ESTABLISHED LAWNS - Even well-established tall fescue or bluegrass lawns must be watered regularly throughout the growing season to keep them green and growing.

Avoid premature watering of tall fescue or bluegrass lawns in the spring. There is generally a good reservoir of soil moisture coming out of the winter and during cooler springtime weather less water is required by the grass plants and don't spoil the grass with unnecessary irrigation either, which can contribute to a shallow root system as the summer stress period approaches.

A soak and wait approach to watering established lawns is recommended. Wait for signs of general drought stress, and then apply sufficient water to moisten the soil to the depth of the root system. Established turf grass will indicate when it is becoming drought stressed by taking on a dull, blue-green color. Moisture stressed grass will also tend to footprint, meaning that the grass that is pressed down when walking across the turf doesn't return to an upright position. If we have an abnormally wet spring, it may be necessary to gradually wean the grass off of its moisture dependency by watering during the transition period.

Turf grass roots will be deeper in spring and fall than in midsummer. To accommodate the root system in spring and fall, apply enough water to moisten the soil to a depth of 6 to 8 inches deep (which should take 1 to 1 ½ inches of water, depending on the soil type).

On level sites, you may be able to apply this much water at one time but don't apply water faster than it can be absorbed by the soil. If water puddles on the lawn, it may absorb enough heat during hot days to scald the grass.

On slopes, water may have to be applied in increments, letting it soak in between cycles but the objective should still be to moisten the soil to a depth of 6 to 8 inches during a 24 hour period, then let the soil dry out before the next irrigation cycle.

Because the root systems of cool season turf grasses, like tall fescue and Kentucky bluegrass, recede during hot weather and because of midsummer heat stress, it may be necessary to water twice a week with ¾ inch of water each time; Kentucky bluegrass may need 1 inch of water three times a week to avoid drought stress. It shouldn't be necessary to water established lawns every day.

Bermudagrass and zoysiagrass (without excessive thatch - see above) require less water during stressful summers than do the cool season species. But, regular watering during the summer will be required to maintain turf quality. Apply the same principles discussed for cool season grasses, deep, infrequent irrigation when the grass exhibits signs of moisture stress. Buffalo grass is our most drought tolerant grass and often will come through our summers without regular watering.

A screwdriver or sharpened piece of concrete reinforcing rod can be used to determine how deep water has penetrated into the soil.

As you get more sophisticated in your approach to home lawn care, you should become more knowledgeable about the rooting depth of the grass on your site, the infiltration rate of water into your lawn and how your grass behaves under stress conditions. Learn where the grass tends to exhibit drought stress first and use these places as a guide.

SUMMER DORMANCY - Established tall fescue or Kentucky bluegrass lawns (those with grass that has gone through a complete growing season), growing in good soil and gradually eased into the summer stress period by weaning it off of moisture dependency, have the capacity to enter a semi-dormant condition when subjected to drought stress; and in this semi-dormant condition may go 2 to 3 weeks or more, without water. However, it's important to keep the crowns at the base of the grass plants alive by applying about 1/4 of an inch of water every couple of weeks if that much rainfall doesn't occur. By following this approach, established bluegrass and fescue lawns, growing on good soil and otherwise maintained appropriately, can survive up to 8 weeks in this semi-dormant condition without substantial irrigation.

Note: Because early fall is an important time to perform several important cultural practices on cool season lawns such as fertilization, core aeration and over seeding, it would be wise to water dormant lawns deeply in mid - late August to establish a reservoir of moisture in the soil and to revive dormant lawns so they can respond to these practices.

WINTER WATERING - The soil supporting any lawn should be moist going into the winter if natural precipitation hasn't provided, thoroughly water before the ground freezes; also water during mid-winter thaws if the winter is dry.

TYPE OF SPRINKLERS - Whether you have an automatic irrigation system or use hoses and sprinklers, you need to familiarize yourself with your set-up.

Straight sided cans, such as tuna fish cans placed beneath the sprinkler pattern will indicate how much water is applied during an increment of time. If you set out several cans, you will be able to identify variations in the distribution pattern and adjust accordingly.

WHEN TO WATER – It's best to water lawns early in the morning, from 4:00 a.m. to 9:00 a.m. At that time of the day, there is usually less wind to deflect the sprinkler pattern, water pressure is generally better and water applied in the morning is present to support the plant during mid-afternoon stress. Routine evening watering is discouraged because the grass may not dry completely before nightfall, which can contribute to disease problems.

CULTURAL PRACTICES - A relatively high mowing height on bluegrass or tall fescue will help conserve a deeper root system through the summer. Mow these species at the high end of their recommended range bluegrass at a height of 2 ½ to 3 inches, tall fescue at 3 to 3 ½ inches tall. Core aeration (fall and/or early spring for tall fescue and Kentucky bluegrass; early summer for zoysia or Bermuda grass) improves the rooting environment of turf grass and improves the infiltration of water into the soil.

Bluegrass or tall fescue lawns that have been over-managed, especially with both late fall and early spring applications of fertilizer are more subject to summer burnout. It's unwise to fertilize cool season lawns in the spring unless you intend to support that growth with regular watering all summer long. Over-management of zoysiagrass, by fertilizing more than is necessary, has been incriminated in thatch build-up, which makes zoysia much less drought tolerant.

LOCALIZED DRY SPOTS - A common problem in residential lawns is the appearance of localized dry spots where the grass exhibits acute, premature symptoms of moisture stress. Localized dry spots may be caused by an underground impediment such as a hardpan layer, buried construction debris, a sand pocket or compaction. Sometimes lawns develop hydrophobic areas where the soil surface sheds water. Thorough, regular core aeration may help to overcome localized dry spots; the use of wetting agents may help to improve infiltration of water into hydrophobic localized dry spots.

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